

Listing of the Claims:

1. (Currently Amended) A method for non-invasive detection of a vagus nerve stimulation signal, the method comprising the following steps:

 applying external electrodes to a patient in proximity to an implanted vagus nerve stimulator;

 detecting a vagus nerve stimulation signal ~~pulse~~ applied by the stimulator to the patient;

 amplifying the detected vagus nerve stimulation signal ~~pulse~~;

 filtering the detected vagus nerve stimulation signal in a bandwidth selected to eliminate extraneous noise; and

 prolonging the detected signal to allow sampling of the vagus nerve stimulation signal and to trigger sampling of at least one other physiological signal to allow for monitoring the effect of the vagus nerve stimulation on the at least one other physiological signal for an extended period of time.
2. (Currently Amended) The method as defined in claim 1, further comprising the step of comparing the detected vagus nerve stimulation signal to a threshold level prior to prolonging the vagus nerve stimulation signal.
3. (Original) The method as defined in claim 1, further comprising the step of electrically isolating the amplified input signal.
4. (Original) The method as defined in claim 1, further comprising the step of rectifying the filtered signal.

5. (Previously Presented) The method as defined in claim 1, further comprising the step of producing an alarm signal providing at least one of a visual or an audio signal to a user indicating that the vagus nerve stimulation signal has been detected.

6 - 20. (Cancelled)

21. (Previously Presented) The method as recited in claim 1, further comprising the step of retaining the filtered signal at a predetermined output signal level for a period of time selected to provide a prolonged vagus nerve stimulation signal allowing sampling of a lower rate than the filtered signal.

22. (Canceled) .

23. (Currently Amended) The method of claim 1 ~~21~~, further comprising the step of detecting an analog signal representative of at least one electrocardiogram (ECG), an electroencephalogram (EEG), a blood pressure measurement, and a breathing measurement.

24. (Currently Amended) The method as defined in claim 23, further comprising the step of electrically connecting each of the vagus nerve stimulation signal and the physiological signal to a controller, the controller being programmed to monitor the physiological signal as a function of the vagus nerve signal.

25. (Currently Amended) The method as defined in claim 24, further comprising the step of storing at least one of the filtered and the prolonged vagus nerve stimulation signal and the physiological signal as a function of time.

26. (Currently Amended) The method as defined in claim 24, further comprising the step of displaying the physiological signal and the at least one of the filtered and the prolonged vagus nerve stimulation signal.

27. (Currently Amended) The method as defined in claim 26, further comprising the step of providing at least one of a visual and an audio output when the prolonged vagus nerve stimulation signal is detected.

28. (Currently Amended) The method as defined in claim 22, further comprising the step of electrically isolating the detected vagus nerve stimulation signal from the filtered vagus nerve stimulation signal and the prolonged vagus nerve stimulation signal.

29. (Currently Amended) The method as defined in claim 17, further comprising the step of rectifying the filtered vagus nerve stimulation signal prior to the step of comparing the filtered vagus nerve stimulation signal to the threshold value.